Appendix F
Capability and Suitability of Lands
Curlew National Grassland (CNG) for Livestock Grazing

A rangeland capability analysis identifies areas with the physical characteristics capable of supporting livestock grazing. Generally, this includes areas producing adequate forage that are accessible to livestock.

Rangeland capability was mapped at a site-specific level during the range analysis process of the 1960's and 1970's. The criteria used for this early analysis are very similar to those used today. Because "capability" is an assessment of the biophysical characteristics conducive to livestock grazing, capable acres do not vary between management plan alternatives. **The determination of rangeland capability is not a decision to graze livestock on any specific area of land, nor is it a decision on livestock carrying capacity.**

Criteria and Process Used to Determine Existing Capable Rangelands on the CNG

Areas considered physically capable of supporting livestock grazing must contain the following features outlined in the Intermountain Region's "Protocol For Rangeland Capability and Suitability Determinations For Forest Plan Revisions." ***It should be noted that the criteria developed for rangeland capability are based on more mountainous terrain typically found in National Forests in the Intermountain Region.***

The Intermountain Region's rangeland capability criteria and protocol are considered collectively rather than singly. National Forest System lands meeting the criteria are considered capable of being grazed by domestic animals.

- Areas with less than 30% slopes for cattle and less than 45% slopes for sheep.

  This criteria was modified for the rangeland capability analysis for the CNG from 30% slope for cattle to 45% slope for cattle. The rationale for this modification was based on CNG topographic terrain. Most of the CNG is comprised of large flat areas with gently rising side-slopes. Where slopes exceed 30%, the extent of slopes >30% is relatively small and slopes are short. Cattle generally can traverse these areas to flatter ground on the ridge tops.

- Areas producing more than or having the potential to produce an average of 200 lbs. of forage per acre on an air-dry basis.

- Areas with naturally resilient soils (not unstable or highly erodible soils).

- Areas where ground cover (vegetation, litter, rock > ¾ inches) is sufficient to protect soil from erosion. The minimum percent cover will be 60%

unless local data is available for use in setting more specific ground cover requirements.

- Areas accessible to livestock

- Areas within one mile of water or where the ability to provide water exists.

  This criteria was modified for the rangeland capability analysis for the CNG from 1 mile to 1.5 miles. The rationale for this modification was based on CNG topographic terrain. Most of the CNG is comprised of large flat areas with gently rising side-slopes. Most cattle will travel up to 2 miles or more over flat terrain to access water.

Information Used to Determine Existing Capable Rangelands on the CNG

The following information was gathered or developed to determine capable rangelands and maps developed which displayed the information:

- Ownership from CFFs (Cartographic Feature Files)

- Slope by 10% breaks from DEMs (USGS 30-meter Digital Elevation Model)

- Soils producing more than 200 pounds forage per acre (Soil Survey of the Caribou National Forest, Idaho, 1990 and local productivity studies).

- Vegetation Cover Types of the Caribou National Forest (GIS layer) and USU satellite imagery

- Location of water sources (perennial streams or point sources from inventory)

Process

A Geographic Information System (GIS) was used to map CNG capable rangeland acres using the following criteria:

- All National Forest Lands within CNG proclaimed boundary

- Slopes less than 45% for cattle. No sheep grazing occurs on the CNG.

- Areas within rangeland vegetation types

- Areas capable of producing at least 200 pounds of herbaceous, air-dry forage per acre.

- Areas within 1.5 miles of water

The CNG vegetation layer identifies three primary vegetation cover types: sagebrush, mountain brush and riparian. Of these, aspen, riparian, sagebrush, mountain brush and grasses/forbs were identified as rangeland types and used in this analysis.

Soil types capable of producing at least 200 pounds per acre of air-dry forage on the CNG were taken from actual site information. Monitoring was used to confirm production potentials.

Results of Rangeland Capability Analysis

All acres (~47,600 acres) on the CNG generally meet all of the capability criteria, with the exception of a small acreage in the South Huffman field. This small acreage in the South Huffman field did not meet the 1.5 mile distance to water criteria. If a water development was located on these acres, all capability criteria would be met. Since the ability to provide water to this location exists, these acres were determined to be capable.

SUITABLE Lands for Livestock Grazing

Suitability considers the appropriateness of livestock grazing for a particular land area, based on the economic and environmental consequences and considerations for other uses that may be affected by livestock grazing. All, or a portion, of the suitable acres could change under the different management options proposed in the range of alternatives. Each of the alternatives proposes a set of goals, objectives, standards and guidelines. Livestock suitability is determined by alternative, based on whether livestock grazing is compatible with management direction in that alternative.

The determination of rangeland suitability in each of the alternatives through the application of management prescriptions is a decision to graze livestock on a specific area of land, but it does not include a decision on livestock carrying capacity. Livestock carrying capacity is determined through site-specific allotment management plans that must be consistent with the goals, objectives, standards and guidelines in the Land and Resource Management Plan for the area.

Suitability criteria include such things as:

- **Rangeland capability** (described above)
- **Management area prescription allocation for each alternative**
- **Areas closed to grazing (Special area designations, such as Research Natural Areas)**
- **Fenced administrative, special use, or recreation facilities**

- **Key wildlife habitat areas**
- **Unique habitats**
- **Areas where the social consequences and values foregone are not acceptable**

Process Use to Determine Livestock Grazing Suitability in each of the alternatives

1) Acres must be capable rangelands and meet all criteria for rangeland capability as described above.

2) Action alternatives were developed using a variety of range management prescriptions to meet the goals and objectives contained in each alternative. Acres contained within these range management prescriptions were calculated using GIS.

3) Alternative uses foregone in each alternative were determined by:

    a. Subtracting acres with management prescriptions that have standards and guidelines that do not allow livestock grazing
    b. Subtracting acres within fenced recreation sites, administrative sites and special use sites
    c. Subtracting acres that are closed to grazing, such as the Sweeten Pond area and tree rows

Each alternative description includes a determination of suitable acres for livestock grazing, based on these criteria and the goals, objectives, standards and guidelines, and management prescriptions applied.